



March 15, 2022

Mr. Stephen Chaplin, Planning Board Chair
Town of Hopedale
78 Hopedale Street
Hopedale, MA 01747

RE: Proposed Warehouse Building
75 Plain Street, Hopedale, MA

Dear Mr. Chaplin,

Bayside Engineering is in receipt of MDM Transportation Consultants, Inc. (MDM) second Peer Review letter dated February 18, 2022, review of the Bayside first response to comments letter on the Traffic Impact and Access Study (TIAS) prepared for the proposed warehouse to be located at 75 Plain Street in Hopedale, MA. The purpose of this letter is to respond to the comments raised on the Bayside response (dated February 3, 2022). The MDM comments requiring responses are identified and addressed below. Only those comments requiring further response or clarification are included.

Comment No. 6

MDM Initial Comment: MDM concurs with the methodology of not taking any transit credit for the Site given the limited public transportation in the area with the closest Bus Stop (Route 140) located approximately 1.3 miles from the Site. However, potential expansion of the MWRTA service to serve the site should be considered as part of the proposed TDM programming for the site. Applicant should consult with the MWRTA and confirm whether the site can be designated as a stop on the MWRTA service route for Bus 14.

Applicant Initial Response: Bayside attempted to contact the MWRTA to determine if it was feasible to extend Bus Route 14 from Milford into Hopedale. Based on input received at the Hopedale Planning Board Public Hearing of January 5, 2022, it was indicated that Bus Route 14 is a route that serves the Town of Milford and that there are currently no plans to modify this route.

MDM Supplemental Comment: The final site plan should be designed to accommodate the ability to add a bus stop in the future should the MWRTA extend service to the area. No further response necessary.

Applicant Response: The site plans have been designed to allow for a future potential bus stop on Plain Street at the site driveway intersection with Plain Street.

Comment No. 8

MDM Initial Comment. *MDM recommends that the applicant confirm that this facility is not a “last mile” distribution facility or sortation warehouse as these facility types have higher trip generation potential. MDM recommends that a potential condition be considered by the Town that would obligate Applicant to supplemental Planning Board review and associated mitigation should the project tenant operate the site as a “last mile” distribution facility or sortation warehouse at trip levels that are materially higher than those represented in the submitted traffic study.*

To establish an appropriate mitigation package MDM also recommends that the Applicant prepare a sensitivity analysis based on a higher generating Parcel Hub/Sortation Warehouse facility using trip rates from ITE as established for other projects in the Commonwealth. This sensitivity analysis would set the foundation for future improvement requirements for the project to the extent traffic monitoring thresholds are exceeded; specific trip thresholds should be outlined by the Applicant in its proposed traffic monitoring program.

MDM recommends that potential conditions be considered by the Town that would obligate Applicant to undergo supplemental Planning Board review and associated mitigation in the case that trip levels materially exceed those of the above-referenced sensitivity analysis. Recent conditions from similar projects in the Commonwealth may serve as a model as follows:

- In the event that a tenant for the property desires to operate a facility that is different from a traditional warehouse use, the owner shall seek a modification from the Board with re-evaluation of project impacts. This includes any uses that serve as regional or local freight forwarder for time sensitive shipments, or regional or local distribution facility.*
- The Applicant or successor shall re-evaluate Project impacts (including but not limited to noise, traffic, stormwater, etc.) and meet with the Board once a tenant is selected for the facility. In the event that Project impacts are greater than characterized in the Project application submittals, the Applicant shall apply for amendment to the permit issued by the Planning Board, as well as any additional permits obtained from local or State regulatory agencies.*

It is imperative that a robust monitoring program is implemented to measure actual performance of the facility during these periods to ensure that proposed mitigative actions fully account for these higher traffic volume conditions without undue queuing or delays in the area. Specific trip thresholds should be outlined by the Applicant as part of a traffic monitoring program to measure actual site performance post-occupancy; typically, any increase of more than 10 percent of projected levels is an appropriate basis/threshold for revisiting potential mitigative actions for a project of this type.

Applicant Initial Response: The proposed facility is not a “last mile” distribution facility or sortation warehouse as these facility types have higher trip generation potential.

To establish an appropriate mitigation package MDM has recommended that the Applicant prepare a sensitivity analysis based on a higher generating Parcel Hub/Sortation Warehouse facility using trip rates from ITE as established for other projects in the Commonwealth. Bayside has looked at the corresponding land use codes and the code closest to this would be LUC 154 - High-Cube Transload and Short-Term Storage Warehouse. Using the ITE data, and LUC 154, the site would generate 864 Daily vehicle trips which is lower than the site traffic generation using ITE LUC 150 – Warehousing (projected 1,074 Daily vehicle trips).

Bayside also compared the trip generation to ITE LUC 155 - High-Cube Fulfillment Center Warehouse. Using the ITE data, and LUC 155, the site would generate 1,060 Daily vehicle trips which is also lower than the site traffic generation using ITE LUC 150 – Warehousing (projected 1,074 Daily vehicle trips).

The Applicant will agree to a condition that would obligate the Applicant to Planning Board review in the event that a tenant for the property is identified that does not fit in the standard ITE LUC 150 – Warehousing definition and is projected to generate project traffic impacts greater than those provided in the TIAS.

A sensitivity analysis was not performed as the corresponding ITE data is lower for Land Use Codes 154 and 155. If this were to be a last mile facility, say Amazon, then with the proposed condition in place, a re-evaluation of the project’s impacts would be undertaken at that time.

Contained in the response to Comment No. 11 is a list of the mitigation measures developed for this project. Included in the response to Comment No. 10 are the details of a proposed Traffic Monitoring Program. This program would measure actual performance of the warehouse during the weekday peak hours to ensure that proposed mitigation measures account for the future traffic volume conditions without undue queuing or delays in the study area.

MDM Supplemental Comment: See MDM Supplemental Response 11 regarding mitigation commitments and monitoring protocols.

Applicant Response: The supplemental response is addressed in the response to Comment No. 11.

Comment No. 11

MDM Initial Comment: MDM concurs, the Applicant should work with the Town with respect to improvement initiatives and to determine a fair-share contribution or implement an improvement alternative.

Applicant Initial Response: The applicant is willing to work with the Town of Hopedale to develop an appropriate improvement package to address the traffic impacts of the project. A number of items have been developed for this traffic package:

1. The Applicant will develop a Traffic Monitoring Program (TMP) to begin six months after initial occupancy and be completed once full (85% or higher) occupancy of the site is achieved and include the following:
 - a) Monitoring will include turning movement counts at the TIAS study area intersections and site driveways between the hours of 5:00 AM and 9:00 AM, and between 4:00 PM and 7:00 PM to capture warehouse peak generating periods.
 - b) Initiation of monitoring will allow for early identification of operational deficiencies that may require immediate action/countermeasures by the Applicant.
 - c) Automatic traffic recorder counts with classification on the site driveways to include a continuous 48-hour period over two (2) weekdays.
 - d) Evaluating motor vehicle crash data at the Project site driveway and TIAS study area intersections.

The results of the monitoring program will be summarized in a report to be provided to the Town of Hopedale upon completion of the data collection. The report will document the traffic volumes associated with the project and any delays, queuing and crash rates at the TIAS study intersections.

If any of the following conditions are documented as part of the monitoring program: 1) traffic volumes of the project exceed the predicted traffic volumes by more than 10% on a regular and sustained basis; 2) there is a material increase in the number of motor vehicle crashes at the project study intersections that are attributable to the Project; or, 3) delays and queuing at the study intersections materially exceed predicted levels due to the impact of the Project, the Applicant will identify and undertake corrective measures to offset the additional project traffic impacts. This may be achieved through:

- a) Installation of additional signage and pavement markings.
 - b) Implementation of signal timing improvements to account for new traffic impacts.
 - c) On-site operations and management strategies to include:
 - i. Expansion of TDM elements.
 - ii. Scheduling of employee and truck operations to minimize impacts.
 - iii. Other measures designed to reduce traffic impacts generated by the Project.
2. Perform Heavy Commercial Vehicle Exclusion studies for Mellen Street, Warfield Street and Neck Hill Road for the Towns of Hopedale and Mendon to submit to MassDOT, if desired. Applicant will agree to restrict truck traffic exiting the site to right turn only onto Plain Street.
3. The Applicant is willing to advance the design and construction of a traffic signal and

appropriate intersection improvements at the Plain Street at Hartford Avenue East intersection subject to the approval of the Town of Hopedale and the Town of Mendon. The project proponent will prepare a Traffic Signal Warrants Analysis (TSWA) for the intersection in accordance with the methodology outlined in the Manual on Uniform Traffic Control Devices (MUTCD). This would include performing a continuous 13-hour manual turning movement count (6:00 AM to 7:00 PM) and performing the associated traffic signal warrants analysis. The results of the TSWA would be summarized in a report and provided to the Town of Hopedale and the Town of Mendon. It is expected that signalization would be warranted at this intersection. .

4. Recognizing the importance of the Plain Street at South Main Street intersection to the residents and businesses in the area, the project proponent will prepare a TSWA for the intersection in accordance with the methodology outlined in the MUTCD. This would include performing a continuous 13-hour manual turning movement count (6:00 AM to 7:00 PM) and performing the associated traffic signal warrants analysis. The results of the TSWA would be summarized in a report and provided to the Town of Hopedale.
5. Upon completion of the development and occupancy of the project, and in conjunction with our TMP, intersection operations at the intersection of Hartford Avenue East, South Main Street and Cape Road will be monitored, and the existing signal timing and phasing will be reviewed, and the Applicant will work with The Towns of Hopedale and Mendon and MassDOT to appropriately modify to reflect traffic conditions at that time.
6. Remove existing signage on South Main Street directing traffic to the Rosenfeld Concrete facility.
7. The Transportation Demand Management (TDM) program identified in the TIAS will be implemented.

MDM Supplemental Comment: MDM concurs with the implementation of a TDM and Monitoring Program. The final Mitigation and Transportation Monitoring Program should be updated/amended to include the following additional or amended items:

- a) ***In addition to the proposed Heavy Vehicle Exclusions, MDM recommends the restriction of larger WB-67 tractor trailer trucks from the site using Cape Road as the turning movements at the Hartford Avenue intersection require use of the opposing turning lanes which creates a safety concern.***
- b) ***The Monitoring Program should require the Applicant to consult with the Planning Board to determine the need for further review/analysis if the site generates project traffic that exceeds the predicted traffic volumes identified in the submitted TIAS by more than 10%.***

- c) *The Applicant should continue to work with the Towns of Hopedale and Mendon to implement intersection improvements at the Plain Street at Hartford Avenue East intersection. Intersection improvements at this location should be designed to accommodate WB-67 tractor trailer trucks and should not preclude future sidewalks and “complete streets” design elements that the Town may elect to pursue in the future.*

The above mitigation relates to a standard warehouse and distribution facility type as defined under the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition - Land Use Code 150. The above mitigation reasonably accommodates projected impacts at this level of trip activity. As a point of reference and consistent with MassDOT guidance, additional trips beyond those predicted in the submitted TIAS that result in a 5% change in intersection volume should be subject to more detail evaluation and potential mitigative actions, particularly the Hartford Avenue at South Main Street/Cape Road intersection. This threshold represents a peak period trip generation of an additional 70 or more peak hour trips during the weekday morning peak hour and 90 or more peak hour trips during the weekday evening peak hour compared to the assumptions documented in the Applicants traffic study. At this level of additional impact, MDM would advise that a more detailed assessment of impact at study locations be conducted to identify additional mitigative actions to offset additional project impact – at least on a proportional impact basis. This may be achieved through (a) implementation of geometric and traffic control improvements to the intersection that address identified operational or safety deficiencies; or alternatively (b) a fair share financial contribution or commitment to the design and construction of intersection improvements as outlined under MDM’s Comment 14 (Monitoring).

Applicant Response: The Applicant, will work with the Town of Mendon to modify the location of the STOP bar for the exclusive left-turn lane on the Cape Road northbound approach to facilitate the ability for large trucks to turn right from Hartford Avenue East. If this effort is shown to be unsuccessful, as part of its leasing negotiations with prospective tenants will discourage prospective tenants with larger WB-67 vehicles from using Cape Road to egress the site. It is anticipated that most trucks will be destined to I-495 and the best route to I-495 would be to stay on Hartford Avenue East. Review of the traffic count data shows that the volume of heavy vehicles turning right from Hartford Avenue East to Cape Road and turning left from Cape Road to Hartford Avenue East during the weekday morning and weekday evening peak hours is less than four (4) vehicles.

The Applicant will consult with the Planning Board to determine the need for further review/analysis if the Monitoring Program indicates that the site generates project traffic that exceeds the predicted traffic volumes identified in the submitted TIAS by more than 10%.

The Applicant will continue to work with the Towns of Hopedale and Mendon to implement intersection improvements at the Plain Street at Hartford Avenue East intersection. Intersection improvements at this location will be designed to accommodate WB-67 tractor trailer trucks and

will not preclude future sidewalks and “complete streets” design elements that the Towns may elect to pursue in the future. A copy of the preliminary conceptual improvement plan is attached.

At the intersection of Hartford Avenue East, South Main Street and Cape Road, if as a result of the monitoring program traffic volumes result in a 5% change in intersection volume, the Applicant will work with the Towns of Hopedale and Mendon to provide a more detailed evaluation and identify potential mitigative actions consistent with the traffic monitoring program.

Comment No. 12

MDM Initial Comment: (a) The Applicant should consult with the Town with respect to complete streets bicycle/pedestrian features even if not desirable by the Town at this time, the design should not preclude the future implementation of pedestrian and bicycle improvements by others in the future. Likewise, area along the site frontage should be reserved to accommodate a future sidewalk connection between the on-site sidewalk and Plain Street. The design plans should be provided to the Town for review and approval and shall be designed to accommodate heavy truck traffic and design speeds in accordance with the observed 85th percentile speeds and AASHTO guidance for lane width and shoulder accommodations. The Applicant shall work with the Town with respect to wetlands impacts if applicable, other permitting, drainage improvements, and the Applicant shall design and implement the roadway improvement prior to initial occupancy.

(b) MDM recommends that the Applicant consider bike accommodations along the roadway given the bicycle use observed along Plain Street in the traffic counts.

(c) The Applicant should consider aligning the proposed site driveway with Mellen Street or Newton Street.

Applicant Initial Response: Any proposed roadway or intersection improvements proposed by the Applicant will be designed and constructed with a Complete Streets approach. Any design plans will be provided to the Town of Hopedale and the Town of Mendon for review and approval. Any improvements will be designed to accommodate heavy truck traffic and design speeds in accordance with the observed 85th percentile speeds and AASHTO guidance for lane width and shoulder accommodations. The Applicant will work with the Town of Hopedale and Town of Mendon with respect to wetlands impacts if applicable, other permitting, drainage improvements, and the Applicant will design and implement the roadway improvement prior to initial occupancy. Bicycle accommodations will be included in accordance with Complete Street concepts.

Along the site frontage, if there is not sufficient room within the existing Plain Street layout to accommodate a sidewalk along the west side of Plain Street, the Applicant is willing to grant an easement for future sidewalk construction by the Town of Hopedale.

As part of the planning for the project, consideration was given to the location of the proposed site

driveway. Due to the nature of the project, and the fact that there will be large trucks, the Applicant knew that sending trucks to the east by way of Mellen Street or Newton Street was not feasible. These two roadways serve residential neighborhoods, and the trucks would have difficulty making turns in these neighborhoods. For this reason, the Applicant is directing all trucks to use Plain Street to/from the south for access and will agree to a right turn only restriction for exiting trucks. ***MDM Supplemental Comment: MDM concurs that the location of the proposed driveway along Plain Street is optimal for visibility purposes. We further concur with the Applicant's proposed right-turn only restriction for trucks which can be reinforced with signs and advance driver notifications.***

In lieu of combining and realigning the Mellen Street and Newton Street approaches to Plain Street, MDM recommends that the southbound left-turn movement onto Mellen Street be restricted to improve safety at the intersection given its close proximity to the proposed driveway and skewed intersection alignment.

As indicated under response No. 11, the Applicant has committed to advance the design and construction of a traffic signal and appropriate intersection improvements at the Plain Street at Hartford Avenue East intersection subject to the approval of the Town of Hopedale and the Town of Mendon. The Applicant has conceptually described these improvements in a teleconference conducted with MDM on February 15, 2022. MDM advises that a concept plan of potential improvements be submitted to the Board as part of the record and that this concept provide the basis for a formal commitment to support the project impacts. MDM concurs in principal that these improvements, which are to be designed to accommodate larger WB-67 truck types and include possible signalization subject to warrants, will adequately support the project. Improvements should be designed to a "complete streets" design standard with appropriate right-of-way accommodation for future sidewalks should the Town elect to pursue such additional features.

Applicant Response: The Applicant is willing to support the Town of Hopedale to restrict the southbound left-turn movement onto Mellen Street from Plain Street.

As indicated in the response to Comment No. 12, the Applicant will continue to work with the Towns of Hopedale and Mendon to implement intersection improvements at the Plain Street at Hartford Avenue East intersection. Intersection improvements at this location will be designed to accommodate WB-67 tractor trailer trucks and will not preclude future sidewalks and "complete streets" design elements that the Towns may elect to pursue in the future. A copy of the preliminary conceptual improvement plan is attached.

Comment No. 13

MDM Initial Comment: (a) The Applicant should install electric vehicle (EV) charging stations within the Project Site at convenient and easily accessible locations to encourage EV use.

(b) To the maximum extent feasible the Applicant should schedule shift changes outside peak hours.

(c) Potential expansion of the MWRTA service to serve the site should be considered as part of the proposed TDM programming for the site. Applicant should consult with the MWRTA and confirm whether the site can be designated as a stop on the MWRTA service route for Bus 14.

Applicant Initial Response: The site is being designed to accommodate electric vehicle charging stations in the future (EV-ready) should a need arise for a tenant or at a tenant's request. In the interim, the Applicant will construct eight (8) EV charging stations in the employee parking areas.

As part of the Transportation Demand Management (TDM) program for the site, the applicant will encourage tenants to implement TDM measures to help reduce the number of single occupant vehicles on the roadways around the site. This would include recommending shift schedules occur outside the peak hours. This will be determined when a tenant or tenants have been identified.

Bayside attempted to contact the MWRTA to determine if it was feasible to extend Bus Route 14 from Milford into Hopedale. Based on input received at the Hopedale Planning Board Public Hearing of January 5, 2022, it was indicated that Bus Route 14 is a route that serves the Town of Milford and that there are no plans to modify this route.

MDM Supplemental Comment: The final site plan should be designed to accommodate the ability to add a bus stop in the future should the MWRTA extend service to the area. No further response necessary.

Applicant Response: As indicated in the response to Comment No. 6, the site plans have been designed to allow for a future potential bus stop on Plain Street at the site driveway intersection with Plain Street.

S. Chaplin, Planning Board Chair
March 15, 2022
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Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

BAYSIDE ENGINEERING, INC.

A handwritten signature in blue ink, appearing to read 'KPC', with a long horizontal flourish extending to the right.

Kenneth P. Cram, P.E.
Director, Traffic Engineering

cc: W. Buckley
D. Hartnett
J. Antonellis, Esq.